

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
RICHMOND DIVISION**

THE TRUSTEES OF COLUMBIA
UNIVERSITY IN THE CITY OF NEW
YORK,

Plaintiff,

v.

NORTONLIFELOCK INC.,

Defendant.

Civil Action No. 3:13-cv-00808-MHL

REDACTED

**COLUMBIA'S OPPOSITION TO NORTON'S RENEWED
MOTION FOR JUDGMENT AS A MATTER OF LAW**

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In its Renewed Motion for Judgment as a Matter of Law (“JMOL Motion”), Norton takes the remarkable position that the jury wrongly decided every issue in the case. After refusing a bench trial, Norton asks the Court to take every issue away from the jury and come to the opposite conclusion. There are numerous problems with Norton’s attempt to discard the jury’s verdict, which they reached after careful attention to and consideration of the evidence.

First, Norton rehashes many of its failed jury arguments and asks the Court to re-weigh the evidence and come to credibility determinations the jury rejected. That is not an appropriate use of a JMOL motion. JMOL is appropriate “only if, viewing the evidence in a light most favorable to the non-moving party (and in support of the jury’s verdict) and drawing every legitimate inference in that party’s favor, the only conclusion a reasonable jury could have reached is one in favor of the moving party.” *Int’l Ground Transp. v. Mayor & City Council of Ocean City*, 475 F.3d 214, 218-19 (4th Cir. 2007). Such a motion is “not an occasion for the Court to usurp the jury’s authority to weigh the evidence and gauge the credibility of witnesses.” *DNT, LLC v. Sprint Spectrum, LP*, 750 F. Supp. 2d 616, 628 (E.D. Va. 2010) (citation omitted). Norton does not come close to meeting its burden.

Second, Norton’s JMOL Motion improperly requests post-trial claim construction, raising a flurry of entirely new arguments. Before losing at trial, Norton was satisfied to submit these issues—whether Norton satisfied the plain and ordinary meaning of several patent claim terms—to the jury as fact disputes, and Norton cannot ask the Court to re-construe the patent claims post-trial with specialized interpretations of the claims in an attempt to avoid the verdict. *See, e.g., Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1320 (Fed. Cir. 2003) (“[I]t is improper for the district court to adopt a new or more detailed claim construction in connection with [a] JMOL motion.”) In many cases, Norton’s argument—now framed as a legal question for the Court

regarding the scope of the patent claims—is identical to the plain meaning argument that Norton made during trial and the jury rejected.

Third, Norton improperly seeks a *fourth* bite at the apple with regard to Norton’s sales to customers outside of the United States. The parties briefed and argued this issue, and the Court decided it as part of *Daubert* motions—at Norton’s insistence—and after the Court agreed with Columbia, Norton requested reconsideration, which the Court properly denied. Post-trial motions are not a backdoor to reconsideration, and Norton provides no basis to reconsider—yet again—a thoroughly argued and decided issue. Norton’s recourse is to appeal if it believes the jury’s damages award impermissibly applied U.S. patent law to foreign conduct (but it plainly did not). Moreover, as shown below, the trial record has made stronger the pre-trial conclusion that Norton’s sales to customers outside of the United States should be taken into account in calculating a reasonable royalty—under 35 U.S.C. § 284—for Norton’s *domestic* acts of infringement.

For these reasons, and others provided below, Columbia respectfully requests that the Court deny Norton’s JMOL Motion in its entirety.

ARGUMENT

I. SUBSTANTIAL EVIDENCE SUPPORTED THE JURY’S FINDING THAT NORTON AND ITS CUSTOMERS DIRECTLY INFRINGED THE ’322 PATENT.

At trial, Norton advanced two defenses to literal infringement of claims 2, 11, and 27 of the ’322 Patent: (i) that the Accused Products do not execute a program “in” an emulator (the “in an emulator” limitation),¹ and (ii) that SONAR/BASH does not use a combined model created using at least two models created using different computers. (Ex. A (“Trial Tr.”) 2069:19-2075:25.) With regard to the first defense, Norton conceded that the Accused Products have an

¹ Norton also argued that the program does not make a function call “in” the emulator. (Trial Tr. 2070:9-11.) Columbia refers to both issues together as the “in an emulator limitation.”

“emulator,” as construed by the Court,² but argued to the jury that programs do not execute “in” that emulator (*id.* 2067:9-17, 2070:3-2071:15). Norton’s trial presentation consisted almost entirely of lawyer-argument, and far more than substantial evidence supported the jury’s conclusion that the Accused Products satisfy the “in an emulator” limitation.

With regard to the second defense, Norton conceded that (i) SONAR/BASH decision trees are models of function calls (*id.* 2072:21-25, 2138:22-2139:2), (ii) SONAR/BASH decision trees are created using BASH submission as inputs (*id.* 2017:12-19, 2197:3-13), (iii) BASH submissions are created for good and bad programs on millions of different customer computers and sent to Norton (*id.* 1079:4-8, 1219:4-23, 2195:21-2197:2; Ex. B (JX-4 (Pereira)) 251:19-25, 252:14-24), and (iv) BASH submissions are created on customer computers to include, among other things, (a) a set of “shields,” each of which has a one-to-one correlation with a function call (Trial Tr. 2013:6-13, 2016:12-25, 2212:13-22), (b) the program attributes that led to the decision that the program was good or bad (*id.* 2209:25-2210:7), and (c) an identifier that represents the path through the decision tree that led to that decision (*id.* 1965:9-12, 2207:19-23).

At trial, the parties presented a fact dispute: whether BASH submissions are *models* of program behavior such that a SONAR/BASH decision tree—created through algorithmic combination of BASH submissions—is a *combined model* of function calls.³ Overwhelming evidence showed that the answer was “yes,” including direct admissions in one of Norton’s own

² At trial, Norton did not dispute that SONAR/BASH constitutes “software, alone or in combination with hardware, that permits the monitoring and selective execution of certain parts, or all, of a program.” (Trial Tr. 2064:15-21, 2067:13-17.) Norton did not challenge the Court’s construction of “emulator” during the 2014 Federal Circuit appeal nor in 2018 claim construction.

³ Norton never requested claim construction for any part of the relevant claim limitation (*i.e.*, “combined model created from at least two models created using different computers”). At trial, Norton acknowledged that the Court did not construe “combined model” or “model,” and that this was a question for the jury. (Trial Tr. 1900:11-24, 1903:15-22, 1904:16-19, 2826:8-2827:17, 2867:20-2868:1.)

documents (PX-236) and a research paper written by Norton's infringement expert, Dr. Jaeger (PX-1002; Trial Tr. 2217:7-2218:4). The jury agreed with Columbia and rejected Norton's confusing arguments. Far more than substantial evidence supported that decision.

A. Substantial Evidence Supported the Jury's Finding that the Accused Products Satisfy the "in an Emulator" Limitation.

Columbia presented substantial evidence that the Accused Products satisfy the "in an emulator" limitation. For example, relying on his source code review, Dr. Bailey testified "an operating environment with SONAR/BASH installed allows for the monitoring and selective execution of programs that are running in that environment," and that "without BASH installed we do not have the ability to monitor and selectively execute." (Trial Tr. 1030:2-1031:23, 1037:1-17, 1270:23-1271:6.) Norton's documents and witnesses confirmed that SONAR/BASH creates a modified operating environment in which programs execute, and SONAR/BASH monitors programs executing in that environment with the ability to allow or block execution. (*Id.* 1941:14-21, 1995:1-21, 1999:14-2000:5 (Kane), 2123:1-24 (Jaeger); *see also* PX-132 at 5; PX-225 at 3; PX-156 at 29; PX-588 at 55; PX-336 at 8; PX-471 at 2-3.)

On the other hand, Dr. Jaeger's trial presentation was short and conclusory (Trial Tr. 2063:16-2071:15), and Dr. Jaeger admitted that he never responded to Dr. Bailey's opinion (*id.* 2131:23-2132:10). Notably, on cross-examination Dr. Jaeger claimed to "have an opinion" in response (*id.* 2132:5-6), but Norton declined to ask him to provide and explain that opinion during redirect. Moreover, it was up to the jury to decide which expert to trust, and the jury chose to credit Dr. Bailey's opinion. Norton's disagreement with that decision is not a basis for JMOL. *See Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1039-40, 1062 (Fed. Cir. 2016) (en banc) (denial of JMOL where jury credited plaintiff's expert testimony).

Norton asks the Court to take the issue away from the jury by re-construing the patent

claims to require that programs execute “in” the SONAR/BASH code *alone* (JMOL at 4) ignoring the operating environment that SONAR/BASH creates when it is installed (and as it is designed to be installed). First, this post-trial claim construction is untimely. In its *Daubert* motion, Columbia asked the Court to address the “in an emulator” limitation because Dr. Jaeger’s opinion was inconsistent with the Court’s 2014 claim construction decision. (Dkt. 376-17 at 32-34.) Norton objected, and the Court denied Columbia’s motion, finding (i) it was an untimely claim construction (Dkt. 717 at 14-15), and (ii) this was a question of fact for the jury using the plain meaning of “in” (*id.*). Before losing at trial, Norton was entirely satisfied to submit this issue to the jury as a fact dispute. Norton’s reversal of course after a jury loss should be rejected.⁴ See *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 904 F.3d 965, 974 (Fed. Cir. 2018) (“It is well-settled that a party cannot reserve a new claim-construction argument for the post-trial motion stage”).⁵

Moreover, Norton’s new construction conflicts with the claim language. Claim 2 requires only “executing at least a portion of a program in an emulator”; claim 11 requires only “computer-executable instructions that, when executed *by a processor, cause the processor to . . . execut[e]* at least a portion of a program in an emulator”; and claim 27 requires only “*a processor* that: executes at least a portion of a program in an emulator.” Nothing in the claim language requires a program to execute in the SONAR/BASH code *alone*; to the contrary, the claims expressly contemplate software run or designed to be run on a computer system. At a minimum, when

⁴ The Court repeatedly admonished the parties that, as a matter of case management, the Court would not entertain additional, endless claim construction arguments. (Dkt. 253 at 2 n.6; Dkt. 713 at 7; Dkt. 703 at 12.)

⁵ See also *TVIIM, LLC v. McAfee, Inc.*, 851 F. 3d 1356, 1363 (Fed. Cir. 2017) (“[L]itigants waive their right to present new claim construction disputes if they are raised for the first time after trial[.]”); *Hewlett-Packard*, 340 F.3d at 1320 (“[I]t is improper for the district court to adopt a new or more detailed claim construction in connection with the JMOL motion.”).

Norton chose to submit this issue to the jury as a plain and ordinary meaning fact dispute, the jury did not have to accept Norton's argument that the preposition "in" meant that the program had to execute in the SONAR/BASH code *alone*. Rather, the jury could credit—and did credit—Dr. Bailey's opinion that programs execute in a modified operating environment created when SONAR/BASH is installed, which constitutes execution "in" an emulator.⁶

B. Substantial Evidence Supported the Jury's Finding that BASH Submissions are Models and Decision Trees Are Combined Models.

Substantial evidence showed that BASH submissions are models, and that a BASH decision tree is a combined model. As an initial matter, there was no dispute about the plain meaning of "model." Dr. Bailey and Norton's witnesses agreed that a model is "a representation of a system or a process" or a "representation of information" (as opposed to the information itself). (Trial Tr. 1079:10-17 (Bailey), 2007:24-2008:10 (Kane), 2202:4-6 (Jaeger); JX-4 (Pereira) 243:7, 243:11-13, 244:13-17.) Dr. Jaeger also agreed that the models used to create the combined model—as required by the asserted claims—need not be machine-learning models, and instead can be "simpl[e]" models of program behavior. (Trial Tr. 2211:24-2212:12.) Examples were found in Dr. Jaeger's 2017 research paper, identifying a set of "three system calls" as a way that "program behavior [is] modeled." (*Id.* 2213:8-23, 2215:10-2218:4; PX-1001; PX-1002.) Consistent with Dr. Jaeger's paper, Norton's 30(b)(6) witness testified that a simple model of function calls can be created by "counting" function calls made by an executing program. (JX-4 (Pereira) 244:13-245:12.) A selection of function calls or attributes—as opposed to collecting all

⁶ The asserted claims require that "at least a portion" of a program is executed and "a function call" is made in an emulator. Even under Norton's new construction—requiring a program to execute "in" the SONAR/BASH code *alone*—Mr. Kane's testimony supports the verdict. The jury could have chosen not to believe his *ex post* explanation of his prior testimony or decided that a program's "CPU pointer" is enough to satisfy the claims. (Trial Tr. 1998:2-1999:8, 2034:2-2035:21.)

of the raw data generated by a program execution—is a generalized way to represent program behavior that has predictive value for future programs.⁷

Dr. Bailey also explained why a person of skill would identify BASH submissions as models: the submissions include representations of program behavior built on customer computers. (Trial Tr. 1188:4-12, 1189:24-1190:13, 1191:15-1192:9, 1194:18-25.) That representation is a set of function calls made by the program (“dynamic attributes” or “shields”), including the function call that caused SONAR/BASH to analyze the program. (*Id.*) The set is not every function call made by the program, but instead represents Norton’s selection of attributes representative of behavior. (*Id.* 1051:13-1052:6, 2215:10-2217:23; PX-1001; PX-1002.)

As shown at trial, the BASH submission also identifies whether SONAR/BASH disposed of the program as good or bad. (Trial Tr. 1188:4-12, 1189:15-1190:7, 1194:7-10.) Thus—in combination with the set of “shields”—the submission is a generalized representation of good or bad program behavior (*i.e.*, a model). Norton’s only infringement fact witness confirmed that a BASH submission—as opposed to a “ping”—contains this set of selected attributes (“shields”), which is substantially the same as the set of system calls that Dr. Jaeger identified as a model of program behavior.⁸ (*Id.* 2012:23-2014:17, 2215:10-2217:23; PX-1001; PX-1002.) Dr. Bailey also explained that Norton collected BASH submissions, and Norton periodically combined them to create a new decision tree, which was a more complex machine-learning model. (Trial Tr. 1203:7-

⁷ If a set of {S1, S2, S3} was associated with a bad program, and a set of {S3, S6, S8} was associated with a good program, each set can be used to make a prediction about whether a future program—although very different from the two modeled programs—is good or bad depending on whether that program also has {S1, S2, S3} or {S3, S6, S8}. Precisely as stated in Dr. Jaeger’s paper, this is a simple way by which “program behavior [is] modeled.” (Trial Tr. 2217:15-16.)

⁸ By modeling program behavior on each customer computer, Norton spread the computational workload among an application community to make a stronger decision tree (Trial Tr. 1247:11-25, 1248:6-24), exactly as contemplated by the Asserted Patents (PX-830 at 6:31-47).

1204:21.) Dr. Bailey also explained that persons of skill use the term “training,” which “simply means to take a set of input data and apply the mathematical algorithms to output a decision tree.” (*Id.* 1196:25-1197:8, 1202:6-20.)

Dr. Pereira, Norton’s 30(b)(6) witness, echoed Dr. Bailey’s testimony: a decision tree is a “combination of the models of known good and known bad,” and “it’s by combining an understanding of both” types of programs “that you’re able to create the most robust model that you can.”⁹ (JX-4 (Pereira) 251:19-25, 252:14-24.) And importantly, a document that Norton published for customers confirmed the same: Norton wrote that it “use[s] many models and combine[s] them in a good way” in an article that discussed machine learning behavioral detection (*i.e.*, SONAR/BASH). (PX-236 at 3; *see also* Trial Tr. 1985:7-22, 2009:9-11, 2018:11-2022:19 (Kane) (“machine learning-based . . . behavioral protection” refers to SONAR/BASH and “training” refers to creation of decision trees).) Norton did not even attempt to explain away its admission during trial, nor does it do so in its JMOL Motion.¹⁰

Although the jury found that the machine-learning “training data” for Norton’s decision trees (*i.e.*, the BASH submissions) are models, Norton now asks the Court to re-construe the claims such that “models” cannot be “training data.” (JMOL at 5-9.) This result-oriented argument fails for several reasons. First, before losing at trial, Norton was satisfied to present this issue to the jury as a question of fact. At trial, the parties presented their respective positions and evidence.

⁹ Norton asks the Court to disregard Dr. Pereira’s testimony, claiming that “Dr. Bailey conceded that Mr. [sic] Pereira did not say that the decision tree was created from the combination of two models.” (JMOL at 8.) That is not accurate. (Trial Tr. 1292:3-17.)

¹⁰ Norton was fully aware of this exhibit because it featured prominently in the June 2021 *Daubert* hearing. (Ex. E (June 4, 2021 Hr’g Tr.) at 316:16-24.) Notably, Norton did not produce this exhibit—although clearly responsive to discovery requests—and Columbia’s counsel had to excavate it from an archived Norton webpage.

(*See supra* at 6-8; Trial Tr. 1959:3-1960:8, 2080:13-2081:2, 2086:10-2087:3.) The jury agreed with Columbia. Here too, Norton asks the Court to take the issue away from the jury, but Norton cannot raise a new claim construction argument only after losing at trial.

Moreover, Norton’s new claim construction is wrong. There is no reason that, *e.g.*, a set of simple models cannot be machine-learning “training data” for a more complex model. Dr. Bailey explained that “training data”—a term of art in the context of machine learning—“of course” can consist of models. (*Id.* 1202:6-20, 1304:8-12, 1079:10-17, 1080:14-22.) Additionally, Norton’s witnesses had the opportunity to disagree with Dr. Bailey’s definition of “model”—and propose a definition that would preclude “training data”—but no witness disagreed.¹¹ (*Id.* 2007:24-2008:6 (Kane), 2198:23-2199:1 (Jaeger); JX-4 (Pereira) 243:7, 11-13, 244:13-20.) Norton itself referred to “training” of a machine-learning model as “us[ing] many models and combin[ing] them in a good way,” and “comb[ing] predictions from many different models.” (PX-236 at 3; Trial Tr. 2018:10-2019:15, 2020:11-2023:2.)

Finally, Norton argues that the Court prevented it from offering Dr. Jaeger’s testimony about the patent specification, which purportedly would have shown that the ordinary meaning of “model” excludes “training data” (JMOL at 8 n.3). *First*, this argument is procedurally improper. “[A] Rule 50 motion . . . is a vehicle to challenge the sufficiency of the evidence presented in a case, not evidentiary rulings.” *Protostorm, LLC v. Antonelli, Terry, Stout & Krauss, LLP*, 2015 WL 3605143, at *15 (E.D.N.Y. June 5, 2015). *Second*, the Court’s discretionary decision to exclude Dr. Jaeger’s claim construction testimony was appropriate for the reasons stated during

¹¹ Norton’s citation to *Wis. Alumni Research Found. v. Apple, Inc.*, 905 F.3d 1341 (Fed. Cir. 2018) (“*WARF*”) is misguided (JMOL at 6-8). *WARF* explained “[g]iving a term its plain and ordinary meaning does not leave the term devoid of any meaning whatsoever.” 905 F.3d at 1348. Dr. Bailey gave meaning to “model,” and his opinion was based on professional experience, a widely used computer science dictionary, and his reading of the patent.

trial. (Trial Tr. 1890:3-1897:5, 1903:7-13, 1906:6-1907:1, 2045:2-2050:20.) An expert cannot suggest to the jury that claims are limited to examples in the specification—that is legally wrong and improper because claim construction cannot be argued to the jury.¹² The Court did not prohibit Norton from offering a plain meaning of “model”—rather, all of Norton’s witnesses agreed with Dr. Bailey’s plain meaning—and the Court correctly prohibited Dr. Jaeger from suggesting to the jury that the claims were limited to specific examples in the specification.

II. SUBSTANTIAL EVIDENCE SUPPORTED THE JURY’S FINDING THAT NORTON DIRECTLY INFRINGED THE ’115 PATENT.

With regard to the ’115 Patent, Norton seeks JMOL purportedly because no reasonable juror could have found that Norton meets the claim limitation “upon identifying the anomalous function call, notifying an application community that includes a plurality of computers of the anomalous function call” (the “notification limitation”).¹³ (JMOL at 9-11.) Norton is wrong, and substantial evidence supported the verdict.

At trial, Norton did not dispute that its customers constitute an “application community” that includes a “plurality of computers.” (Trial Tr. 1241:4-1242:13 (Bailey); *see id.* 2136:25-2138:21 (Jaeger).) Nor did Norton dispute that it coordinates a “process” for disseminating updated decision trees to the “application community,” comprising (1) SONAR/BASH “sending . . . the BASH submissions” to Norton, (2) Norton “creat[ing] [] the new decisions trees” that use

¹² *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments”); *EMC Corp. v. Pure Storage, Inc.*, 2016 WL 775742, at *4 (D. Del. Feb. 25, 2016) (excluding testimony about meaning of claim term “by reference to the specification” because it “necessarily constitute[d] impermissible claim construction”).

¹³ Norton performs some of the steps of claim 2 and Norton’s customers perform other of the steps, as Dr. Bailey explained at trial. (Trial Tr. 1254:17-1258:5.) For that reason, the Court instructed the jury on joint infringement under the Federal Circuit’s *Akamai* precedent. (*Id.* 2833:16-2834:10.) Importantly, Norton has not challenged the sufficiency of the evidence supporting joint infringement, which makes Norton liable for *direct* infringement under § 271(a).

BASH submissions as inputs, and (3) Norton “send[ing] that combined model back to Norton’s customers to enhance their protection.” (*Id.* 1242:13-1243:19 (Bailey); *see id.* 1243:20-1244:21, 2136:16-2137:14 (Jaeger); JX-4 (Pereira) 228:3-6, 228:10-14, 229:11-13, 229:25-230:5.) Nor did Norton dispute that the notification requirement could occur through an intermediary, and thus the claims do not require direct and immediate notification. (Trial Tr. 2138:11-21.)

Although not disputing nearly all of the notification limitation, the JMOL Motion repeats two narrow arguments the jury rejected. First, SONAR/BASH notifies Norton of an anomalous function call on a customer computer soon after detection, but Norton aggregated those notifications and disseminated them to the application community (in the form of an updated decision tree) every 3-6 months. (*Id.* 1245:2-1246:23, 2091:8-2092:4.) Norton argues that no reasonable juror could find that such notification occurred “upon” identification of an anomalous function call (*i.e.*, a question of timing). This first argument fails for several reasons.

As an initial matter, Columbia moved to exclude Dr. Jaeger’s testimony that imposed a timing requirement on notification (Dkt. 376-17 at 32), and Norton objected, arguing that the issue should go to the jury. The Court agreed with Norton that Columbia’s argument was untimely claim construction. (Dkt. 717 at 12-13.) After losing at trial, Norton reverses course yet again and asks the Court to take this issue away from the jury. But as with the other limitations explained above, that request for post-trial claim construction must be denied under controlling law.

Additionally, Norton’s new claim construction is again wrong: “upon” does not require immediacy, and the jury was not required to accept Norton’s argument that it did. (JMOL at 10-11.) If the patentee had intended to include such a requirement, the claims would have said “immediately after” or “immediately upon.” Additionally, Norton’s Dr. Jaeger admitted that the notification limitation does not have an immediacy requirement. (Trial Tr. 2089:24-2090:4,

2138:11-21.) A natural reading of the claim—with which the jury apparently agreed—is that notification occurs after identification of an anomalous function.

Moreover, even if the claims had a timing requirement, whether Norton’s notification was sufficiently timely to satisfy the limitation was a fact question for the jury—and Norton was happy to treat it as such before the verdict. Neither Norton nor Dr. Jaeger explained to the jury how much time could pass before the notification no longer was timely—*e.g.*, an hour, day, or week—and the jury was left with the unsatisfying explanation that Norton simply thought 3-6 months was too much time. On the other hand, Columbia provided substantial evidence to support its position. Dr. Bailey explained Norton’s notification process (*id.* 1244:22-1246:23) and testified that a person of skill would consider Norton’s notification process within the scope of the claim language, despite the delay between its beginning and end (*id.* 1247:3-10). Dr. Bailey also explained why his opinion was consistent with a goal of the invention: it “make[s] sense . . . from a commercial perspective” because “the value of the patents . . . is to learn from communities . . .[s]o it makes sense that they are going to . . . aggregate those things, and make decisions about when best to update the models for its customers.” (*Id.* 1247:1-25.) Although Dr. Jaeger had a different view (*id.* 2089:24-2092:4), the jury chose to credit Dr. Bailey’s testimony (*see id.* 1247:3-25).¹⁴ The record evidence was more than sufficient to sustain the verdict.¹⁵

¹⁴ “[T]he jury is permitted to make credibility determinations and believe the witness it considers more trustworthy.” *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1168 (Fed. Cir. 2015); *see also Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 980 (Fed. Cir. 2021).

¹⁵ Norton caricatures Dr. Bailey’s opinion with reference to a hypothetical loose nail fixed many years later after it was identified. (JMOL at 11 n.14; Trial Tr. 1310:6-23.) Norton’s counsel made this point at trial—loudly and often—but the jury found it unpersuasive. Here, Norton collected customer notifications over a period of 3-6 months before issuing a new decision tree (Trial Tr. 1242:20-1247:25), not many years. It was reasonable for a juror to decide that Norton’s timing satisfied the claim limitation. Moreover, Norton continuously received BASH submissions, and some of them were received very close in time to Norton’s creation and distribution of a new decision tree—*i.e.*, Norton received at least some of the submissions within days of disseminating

Norton also argues that it did not satisfy the notification limitation because customers were not “made aware of any particular anomalous function call from some other customer computer.” (JMOL at 10.) But this is yet another new claim construction argument—imposing a new restriction on the claims—that Norton improperly raised for the first time after trial. The plain claim language (“notification of the anomalous function”) contains no “particularity” requirement, and the jury did not have to agree with Norton’s argument that it did.

Here too, Norton was satisfied to treat this as a fact question for the jury before the verdict. On the fact question, substantial evidence supported the jury’s finding. Dr. Bailey demonstrated why Norton’s process “constitute[s] notification of an anomalous function call,” explaining that “[i]t’s because the BASH submission, which contains the anomalous function call model, is used in creating the new combined models in the decision trees . . . sent back to its customers.” (Trial Tr. 1249:24-1250:16.) Dr. Bailey presented a chart summarizing the changing prevalence of function calls in SONAR/BASH decision trees released over time, and showed the “constantly changing [] role . . . a particular function call plays in the combined model in response to being notified by the members of the Application Community.” (*Id.* 1250:10-1252:19.) On the other side, Norton’s case was short and conclusory (*id.* 2092:14-22), and Dr. Jaeger did not rebut Dr. Bailey’s data table. Substantial evidence supported the jury’s decision to side with Columbia.

III. SUBSTANTIAL EVIDENCE SUPPORTED THE JURY’S FINDING THAT NORTON INDIRECTLY INFRINGED THE ’322 PATENT AND WILLFULLY INFRINGED THE ’322 AND ’115 PATENTS.

Norton requests JMOL on indirect infringement of the ’322 Patent and willful infringement of the ’115 and ’322 Patents. Norton primarily argues that the Court should discard the jury’s verdict because of insufficient evidence of Norton’s knowledge of infringement. (JMOL

a new decision tree. The jury’s conclusion could have been based on submissions received close in time to creation of a new decision tree.

at 11-19).¹⁶ Norton is wrong and substantial evidence supported the jury's verdict.

A. Substantial Evidence Supported the Jury's Conclusion that Norton Had Knowledge of Its Infringement (Actual or Willful Blindness).

"[K]nowledge of infringement can be inferred from circumstantial evidence," *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*, 824 F.3d 1344, 1347 (Fed. Cir. 2016), and should be based on the "totality of the circumstances presented in the case," *WCM Indus., Inc. v. IPS Corp.*, 721 F. App'x 959, 970 (Fed. Cir. 2018). Here, the jury reasonably could infer Norton's knowledge of its infringement based on Norton's (i) knowledge and likely copying of the inventions disclosed in the Asserted Patents after Norton's Brian Witten learned of Columbia's patent-pending technology in 2005 and asked to license it,¹⁷ and (ii) pre-suit notice from Columbia that the Asserted Patents had issued and Norton needed a license. *See, e.g., Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1245 (Fed. Cir. 2017).¹⁸

Pre-Issuance Actual Knowledge. Columbia presented evidence showing that Norton knew of Columbia's patented technology as early as 2005: (i) Norton became aware in 2005 of

¹⁶ The knowledge requirement is the same for induced, contributory, and willful infringement (Trial Tr. 2836:1-2837:8 (induced); *id.* 2837:9-2838:19 (contributory); *id.* 2838:23-2839:13 (willful)). *See Roche Diagnostics Corp. v. Meso Scale Diagnostics, LLC*, 30 F.4th 1109, 1119 (Fed. Cir. 2022); *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 764-65 (2011).

¹⁷ The evidence establishing Norton's knowledge and copying of Columbia's technology prior to the issuance of the Asserted Patents is set out in detail in Columbia's Motion for Enhanced Damages Under 35 U.S.C. § 284 (Dkt. 1251 at 7-12).

¹⁸ *See also Asia Vital Components Co. v. Asetek Danmark A/S*, 377 F. Supp. 3d 990, 1017-18 (N.D. Cal. 2019) (evidence showed infringer knew of patent application for several years, knew of patents soon after issuance, and knew of patentee's infringement allegations based on filing of action for declaratory relief); *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1371 (Fed. Cir. 2017) (affirming denial of JMOL in light of "substantial evidence . . . that [defendant] knew about the patents before they issued" and failed to investigate them adequately after issuance); *KAIST IP US LLC v. Samsung Elecs. Co.*, 439 F. Supp. 3d 860, 884 (E.D. Tex. 2020) (denying JMOL where evidence showed that "as early as 2002 [defendant] was aware that [plaintiff] had filed for a patent for his invention and that he had asked [defendant] to take a license," and that defendant was made aware of patents after issuance).

Columbia's provisional patent application that became the Asserted Patents, when Columbia presented the technology at a workshop that Norton's Mr. Witten attended (Trial Tr. 573:1-574:7; PX-83); (ii) following that workshop, Columbia's Professor Stolfo told Mr. Witten that the technology was covered by "IPR" (intellectual property rights), and Mr. Witten requested to license the technology from Columbia (Trial Tr. 574:16-580:21; PX-83; *see* PX-776); and (iii) despite continuing licensing discussions with Columbia in the 2010-2011 time frame (Trial Tr. 374:16-395:8; *see* PX-426; PX-836; PX-77; PX-389; PX-37; PX-72), Norton did not take a license but used the patent-pending technology starting in 2009 (Trial Tr. 1020:18-1021:25, 1027:15-25, 1228:23-1229:3, 1261:7-9, 2820:7-2821:15). Trial admissions confirmed knowledge: Norton's lawyer admitted to the jury that at least by 2007 Norton and "the whole world" could "see" the published patent application that became the Asserted Patents. (*Id.* 1566:1-13.)

Post-Issuance Actual Knowledge. At trial, Columbia also showed that it notified Norton of each Asserted Patent after it issued. Columbia sent Norton a letter in August 2012 specifically identifying the '115 Patent and advising that Norton required a license. (*Id.* 395:13-396:9; PX-331 at 1-2.) Likewise, Columbia informed Norton that it required a license to the '322 Patent on December 6, 2013. (Trial Tr. 397:22-398:16; PX-22 at 1.) Columbia then filed complaints asserting infringement. (Trial Tr. 398:17-399:2; *see* Dkt. 12.)

Willful Blindness. Columbia also presented evidence showing that Norton took "deliberate action to avoid learning" of its infringement. Norton's 30(b)(6) witness, Barry Laffoon, testified that as of 2014, (i) Norton's engineers had never read the Asserted Patents, (ii) Norton had never even considered whether to "investigate whether [the Accused Products] are infringing Columbia's patents," (iii) Norton had never "instruct[ed] anybody on [the engineering] team to research the Columbia patents," and (iv) Norton had not instructed anyone to "prepare

design-arounds to the Columbia patents.” (Trial Tr. 1418:5; Ex. C (JX-5 (Laffoon)) 42:18-21, 46:17-47:1, 104:17-21.) At a second 30(b)(6) deposition in 2019, Mr. Laffoon confirmed that—five years later—Norton employees still had not “looked at the patents in this case,” and when asked whether he had ever discussed with anyone at Norton whether “by changes to its product or processes, [Norton] could avoid infringement of the patents,” he replied: “We don’t do that at [Norton].” (JX-5 (Laffoon) 67:8-10, 69:6-15.) Courts frequently conclude that a practice or policy of not reviewing patents can “give[] rise to willful blindness.” *Motiva Pats., LLC v. Sony Corp.*, 408 F. Supp. 3d 819, 833-34 (E.D. Tex. 2019).¹⁹

Against the backdrop of this evidence, Norton offered no defense. The record is devoid of evidence that Norton (i) independently developed the infringing technology, (ii) lacked actual knowledge of either the provisional or published patent application or, after issuance, the Asserted Patents, or (iii) carried out any investigation to determine whether it infringed. Although Broadcom’s Mr. Kane gave a monosyllabic answer (“no”) in response to Norton’s lawyer asking if “Symantec [got] the idea for SONAR/BASH from Columbia University” (Trial Tr. 1951:21-23), Mr. Kane was asked no further questions. Mr. Kane also admitted on cross-examination that he did not have a role in the design and development of the infringing technology (*id.* 1985:23-1988:14, 1990:9-13), so he could not possibly know how Dr. Pereira and others got the idea.

Norton’s JMOL Motion attacks the evidence piecemeal without considering the “totality

¹⁹ See also *VirnetX Inc. v. Apple Inc.*, 925 F. Supp. 2d 816, 833 (E.D. Tex. 2013) (plaintiff “presented evidence that [defendant] believed there was a high probability that the technology at issue was patented,” and presented “a clear pattern of behavior by [defendant] employees, which the jury was free to consider when determining whether [defendant] took deliberate steps to avoid confirming infringement”), *aff’d in relevant part*, 767 F.3d 1308 (Fed. Cir. 2014); *Smith & Nephew, Inc. v. Arthrex, Inc.*, 502 F. App’x 945, 950 (Fed. Cir. 2013) (reversing district court’s grant of JMOL and reinstating jury verdict where evidence that defendant “knew of the [] patent prior to any infringement” and “made no attempt to compare its [products] to the claims of the [infringed patent]” was sufficient to support the jury’s willful blindness finding).

of the circumstances presented in the case.” *WCM Indus.*, 721 F. App’x at 970. Norton argues that its 2005 knowledge of the provisional application and the related licensing discussions are irrelevant because they occurred “years before” the patents issued. (JMOL at 12.) But as shown above, the evidence of knowledge did not consist of pre-patent issuance events alone. Rather, Columbia presented evidence of pre-issuance knowledge and copying *coupled with* irrefutable evidence of actual knowledge before this lawsuit started²⁰ and through the complaints filed in this case. That is sufficient to sustain the verdict. *See Georgetown Rail Equip.*, 867 F.3d at 1245.

Finally, Norton argues that the defenses its lawyers devised in litigation negate knowledge as a matter of law. (JMOL at 14.) Norton misses the mark. As the Supreme Court observed in *Halo*: “culpability is generally measured at the time” the challenged conduct began, and emphasis on litigation defenses would “insulate[] the infringer . . . even if he [or she] did not act on the basis of the defense or was even aware of it. . . . [S]omeone who plunders a patent—infringing it without any reason to suppose his [or her] conduct is arguably defensible—can nevertheless avoid comeuppance . . . solely on the strength of his [or her] attorney’s ingenuity.” *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 105 (2016). And post-*Halo*, the Federal Circuit explained: knowledge “can be met by proof of what [the infringer] in fact subjectively believed,” which “is not answered as a matter of law by the objective reasonableness of a contrary belief,” (e.g., litigation defenses). *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1287 (Fed. Cir. 2020).

Norton does not have a scintilla of evidence that it considered its litigation defenses at a

²⁰ Norton argues that the August 2012 letter identifying the ’115 Patent only conferred knowledge that the patent “existed, but failed to provide any evidence that Norton knew or should have known it infringed.” (JMOL at 13.) This argument ignores the totality of the evidence. In combination with Norton’s actual knowledge of the issued patents, a reasonable juror could find that Norton knew that it infringed (because the pre-issuance evidence suggested copying). The standard Norton advises would make it impossible to prove knowledge with circumstantial evidence.

relevant time—when it (i) learned of the patent-pending technology in 2005 and offered to license it, (ii) copied the technology to launch the infringing product feature in 2009, (iii) engaged in 2010-2011 licensing discussions with Columbia, and (iv) received actual notice of the ’115 Patent and ’322 Patent before litigation. If the facts supported it—and they obviously do not—Norton could have mounted an advice of counsel defense (*e.g.*, Norton was advised in 2012 that the ’115 Patent was invalid) and the jury could have taken that into account when it balanced the evidence. Norton offered *no defense*, and the one-sided record virtually compels the conclusion that Norton subjectively knew it was infringing the Asserted Patents or was willfully blind to infringement, regardless of litigation defenses.²¹ At a minimum, the jury could reasonably make that finding.²²

B. Substantial Evidence Supported the Jury’s Findings with Respect to the Other Unique Elements of Induced and Contributory Infringement.

With regard to induced infringement, Norton argues that Columbia failed to present “any evidence substantiating that Norton had a specific intent to induce infringement.” (JMOL at 14.) Norton is wrong. Columbia presented evidence establishing that Norton (i) sells the Accused Products with SONAR/BASH turned on by default (Trial Tr. 1231:18-1232:9); (ii) encourages customers to leave SONAR/BASH enabled (*e.g.*, “[y]ou should enable SONAR”) (*id.* 1232:10-

²¹ Norton’s argument also is out of place in a Rule 50 motion. To the extent litigation defenses are given any consideration, that would happen only in the context of the *Read* factors—a balancing test for the Court to assess enhanced damages—not in the context of the sufficiency of the evidence of knowledge—a fact question for the jury. Moreover, as Columbia explained in its Motion for Enhanced Damages (Dkt. 1251 at 7, 15-17, 20-21, 26), after the Supreme Court’s *Halo* decision, Norton’s litigation defenses should be given zero or *de minimis* weight even in the Court’s enhanced damages analysis and balancing of the *Read* factors.

²² Norton did not request that the special verdict form ask the jury to identify the time interval during which it found Norton’s infringement to be willful. Consequently, Norton waived any argument that its infringement was not culpable for specific time intervals. *See Pavo Sols. LLC v. Kingston Tech. Co., Inc.*, 2021 WL 3116849, at *5 (C.D. Cal. Feb. 16, 2021) (“limited in time” argument waived under identical circumstances); *see also Polara Eng’g Inc. v. Campbell Co.*, 894 F.3d 1339, 1354-55 (Fed. Cir. 2018) (same).

20, 1233:8-1234:2, 1234:20-1235:8; JX-4 (Pereira) 119:23-24, 120:1-13; *see also* PX-555 at 13; PX-565 at 44); (iii) instructs its product managers to encourage customers to enable SONAR/BASH (Trial Tr. 1234:3-17); (iv) touts the value of SONAR/BASH to its customers in online and other marketing materials (*id.* 1237:18-1238:10; *see* PX-241 at 1); and (v), as a result of these efforts, the “vast majority” of customers leave SONAR/BASH enabled (Trial Tr. 1235:9-1237:17). This evidence was legally sufficient for the jury to conclude that Norton had specific intent to encourage its customers’ infringement. *See GlaxoSmithKline LLC v. Teva Pharms. USA, Inc.*, 7 F.4th 1320, 1333-35 (Fed. Cir. 2021) (evidence sufficient when product label instructed physicians to use the product in an infringing manner).²³

With regard to contributory infringement, Norton argues that there was insufficient evidence for the jury to conclude that SONAR/BASH had no “substantial non-infringing uses.” (JMOL at 15-16.) Not so. Dr. Bailey testified that he could not identify any non-infringing use of SONAR/BASH, and neither could Norton. (Trial Tr. 1230:7-1231:4.) Dr. Bailey’s testimony constitutes substantial evidence. *Monsanto Co. v. McFarling*, 488 F.3d 973, 980-81 (Fed. Cir. 2007) (holding expert’s testimony constitutes substantial evidence). The jury heard Dr. Bailey’s opinion that there was no substantial non-infringing use for SONAR/BASH—Norton did not offer one—and the verdict should be sustained.²⁴

²³ *See Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 936 (2005) (“[A]dvertising an infringing use or instructing how to engage in an infringing use, show[s] an affirmative intent that the product be used to infringe.”).

²⁴ Norton’s argument that the Accused Products have a non-infringing use because SONAR/BASH can be “shut[] off . . . completely” (JMOL at 15-16) is contrary to Federal Circuit precedent. The relevant question is whether the infringing component—SONAR/BASH—has a “substantial non-infringing use,” not whether that component can be removed or turned off. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F. 3d 1301, 1320-21 (Fed. Cir. 2009) (“[A]n infringer should not be permitted to escape liability as a contributory infringer merely by embedding [the infringing apparatus] in a larger product with some additional, separable feature before importing and selling it.”).

IV. SUBSTANTIAL EVIDENCE SUPPORTED THE JURY'S DAMAGES AWARD.

A. Substantial Evidence Supported the Jury's 1% Reasonable Royalty.

"A jury's decision with respect to an award of damages must be upheld unless the amount is grossly excessive or monstrous, clearly not supported by the evidence, or based only on speculation or guesswork." *Ultratec, Inc. v. Sorenson Commc'ns, Inc.*, 733 Fed. App'x 535, 540 (Fed. Cir. 2018) (quoting *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1310 (Fed. Cir. 2009)). Norton argues that Columbia did not adduce sufficient evidence to support the jury's 1% reasonable royalty (JMOL at 25-28), but that argument cannot withstand the trial record.

Columbia presented extensive evidence—often Norton's own documents—so the jury would understand Norton's motivation for launching SONAR/BASH and its role in Norton's technological and commercial success. (Trial Tr. 1434:9-1437:16, 1442:2-1447:1, 1447:9-1449:12, 1450:7-1452:2, 1472:1-6, 1479:11-1481:6; *see also* PX-315 at 8; PX-490 at 1; PX-501 at 1; PX-504 at 2; and PX-530 at 12-15.) Columbia's Dr. Cole then explained steps that he took to apportion each accused product's value to Columbia's Asserted Patent claims. (Trial Tr. 1484:20-1517:23; *see also* PX-170 at 1; PX-192 at 1; PX-350 at 2.) From that apportioned revenue, Dr. Sullivan calculated the profit attributable to Columbia's patented technology (Trial Tr. 1752:25-1755:17), and then split the profit between Columbia and Norton, accounting for Norton's contribution in commercializing the technology (*id.* 1756:13-1758:2). Taking into account the totality of the evidence—and multiplying the above-described steps—Dr. Sullivan explained that a reasonable royalty rate would be approximately 1.23%. (*Id.* 1758:10-20.) The record fully supports the jury's 1% reasonable royalty.

Norton argues that Dr. Cole did not "adequately explain[]" why his valuation of malware detection changed between 2014 and 2019. (JMOL at 27.) This is an exceedingly weak basis for JMOL. Norton cross-examined Dr. Cole on this issue, and Dr. Cole provided an explanation.

(Trial Tr. 1493:20-1494:15, 1605:5-18.) The jury found Dr. Cole’s explanation to be credible and reasonable, and Norton’s disagreement with the jury’s determination is not a basis for JMOL.²⁵

Norton also argues that certain “assumptions [Dr. Cole] relied on in forming his opinions were incorrect,” but points only to two lines of cross-examination that also are exceedingly weak bases for JMOL. (JMOL at 26.) In the first, Norton suggests that SONAR cannot be a differentiator because the hypothetical negotiation concerned a non-exclusive license (Trial Tr. 1571:15-1576:8), but Norton’s own document supports that it was a differentiator (PX-530 at 15 (“[SONAR] is a huge competitive advantage”)). The second simply reflects a difference in framing when discussing the extent to which other antivirus software companies adopted behavioral technology. (Trial Tr. 1553:7-1557:25.) Most importantly, these two issues did not play a material role in Dr. Cole’s analysis or jury presentation, and the jury’s lack of interest in Norton’s failed attempt to attack Dr. Cole’s credibility with petty issues is not a basis for JMOL.

Norton also repeats its complaint that Dr. Cole considered qualitative factors regarding the importance of the patented feature, and did not rely exclusively on quantitative “block count” data. (JMOL at 27-28.) This argument is defective. First, the Court correctly rejected this same argument at the *Daubert* stage and there is no basis for reconsideration. (Dkt. 737 (“Cole/Sullivan Op.”) at 14-19.) Second, determination of a reasonable royalty “does not require ‘mathematical exactness,’ but a ‘reasonable approximation’ under the circumstances.” *Carnegie Mellon Univ. v. Marvell Tech. Grp.*, 807 F.3d 1283, 1304 (Fed. Cir. 2015).²⁶ It was entirely appropriate for

²⁵ *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F. 3d 1283 (Fed. Cir. 2015) (“[D]isputes over the expert’s credibility or over the accuracy of the underlying facts are for the jury.”); *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1168 (Fed. Cir. 2015) (similar).

²⁶ *See also Virnetx, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1328 (Fed. Cir. 2014) (the Federal Circuit “ha[s] never required absolute precision in this task; on the contrary, it is well-understood that this process may involve some degree of approximation and uncertainty”).

Dr. Cole to consider qualitative factors when valuing Norton's product features—indeed, it was necessary given overwhelming evidence that quantitative information (*e.g.*, block count) did not reflect value for the at-issue product features. (Trial Tr. 1470:6-1479:9, 1483:11-1484:9; *see, e.g.*, PX-288 at 3; PX-350 at 2; PX-504 at 2; PX-530 at 15; PX-607 at 1.) Although Norton insists that SONAR's 1% overall block count must be the measure of its commercial value, that position is untenable in light of evidence from (i) Norton's own website that "there's a world a difference between 99% protection and 100% protection" and "that 1% is entirely what matters" (PX-288 at 3), and (ii) Norton's ordinary course document explaining that although SONAR and Insight have low block count percentages overall, they account for 90% of the detections that matter (PX-511 at 2). Norton made its 1% argument to the jury, but the jury apparently paid attention to the evidence, understood the evidence, and thus rejected Norton's pitch. They were entitled to do so.

Moreover, Norton is wrong to suggest that the jury had to accept "Dr. Cole's say-so" and that his opinion "lack[ed] [] corroborating evidence." (JMOL at 27.) Dr. Cole explained the rationale for his opinions in detail (*see supra* at 20) and supported his opinion with 22 exhibits and with the deposition testimony of Norton employees, allowing the jury to evaluate the basis for his opinion. The jury's decision to credit Dr. Cole's analysis was reasonable.²⁷

Finally, even hypothetically deleting Dr. Cole's testimony from the record, substantial evidence supports the jury's 1% royalty. The jury heard extensive testimony regarding PX-83, an

²⁷ Norton argues that Dr. Cole should have made a deduction for 25% of enterprise users who did not have SONAR/BASH turned on. (JMOL at 27.) Notably, Norton's counsel did not even touch this issue during cross-examination, and the argument is wrong for two reasons. First, it is inconsistent with Federal Circuit law. *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1211 (Fed. Cir. 2010); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1334 (Fed. Cir. 2009). Second, enterprise customers accounted for [REDACTED] of Columbia's damages (Ex. D (Sullivan Add'l Calc'ns) attach. N-3b), and a hypothetical 25% reduction would reduce Dr. Sullivan's royalty rate from 1.23% to [REDACTED].

email chain reflecting licensing discussions in 2005 between the parties regarding the technology at issue. (*E.g.*, Trial Tr. 576:13-582:14, 623:17-637:9, 795:20-797:6 (discussing PX-83).) PX-83 shows that Norton had previously offered to “pay out up to 10% in royalties, one point [*i.e.*, 1%] per institution.” (PX-83 at 2; Trial Tr. 2180:15-2181:3.) Norton’s previous 1% offer to use the same technology in Norton’s products is by itself sufficient to support the jury’s award. *Commonwealth Sci. & Indus. Rsch. Org. v. Cisco Sys., Inc.*, 809 F.3d 1295, 1303 (Fed. Cir. 2015) (no error in using defendant’s license offer “as a lower bound on a reasonable royalty”).

B. Norton’s JMOL Motion Regarding Sales to Customers Outside of the United States Should Be Denied for Several Reasons.

As explained in Columbia’s Opposition to Norton’s Motion for a New Trial (at 3-5), post-trial motions cannot be used to re-argue issues decided by the Court, which amounts to an improper motion for reconsideration.²⁸ The parties thoroughly briefed and argued whether the jury could take into account sales to customers located outside of the United States (“OUS Customers”) when calculating a reasonable royalty for Norton’s domestic infringement. (Dkt. 383 at 13-18; Dkt. 408-1 at 25-36; Dkt. 444 at 12-21; Ex. E (June 4, 2021 Hr’g Tr.) at 276:23-288:2, 336:15-350:13, 380:24-388:9.) The Court decided the issue in Columbia’s favor (Cole/Sullivan Op. at 21-34), and denied Norton’s motion for reconsideration (Dkt. 945 at 5). Framed as a JMOL Motion, Norton takes another bite at the apple, advancing the same flawed arguments that the Court rejected. Columbia respectfully requests that the Court deny Norton’s motion as an improper motion for reconsideration. If the Court decides to reconsider this issue, Columbia respectfully requests that the Court consider the prior briefs on this issue. The jury’s verdict should

²⁸ See also *Radio Networks, LLC v. Baisden Enterprises, Inc.*, 2017 WL 6759943, at *6 (N.D. Tex. Dec. 29, 2017) (“As Defendants have not met their burden, and insofar as they are seeking to relitigate the court’s summary judgment rulings for a second time, the court denies their motion for judgment as a matter of law.”).

be sustained for the reasons explained in Columbia’s previous briefs and the Court’s *Daubert* opinion. Here, Columbia addresses a few key points and additional reasons to sustain the verdict.

1. The Jury Awarded a Reasonable Royalty for Domestic Infringement.

Columbia did not seek, and the jury did not award, damages for acts that occurred entirely outside of the United States. Rather, under 35 U.S.C. § 284, Columbia claimed a reasonable royalty that properly took into account Norton’s sales to OUS Customers, which were rooted in and directly connected to *domestic* acts of infringement under 35 U.S.C. § 271(a). As this Court already explained, Columbia is entitled to claim those damages under *WesternGeco LLC v. ION Geophysical Corp.*, 138 S. Ct. 2129 (2018). (Cole/Sullivan Op. at 21-34); *see also SIMO Holdings Inc. v. Hong Kong uCloudlink Network Tech. Ltd.*, 396 F. Supp. 3d 323, 351 (S.D.N.Y. 2019) (*WesternGeco* “held that [a patentee] could recover for harms abroad that are proximately caused by domestic acts of infringement”).

In again arguing to the contrary, Norton relies on the Federal Circuit’s decision in *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1372-73 (Fed. Cir. 2013). (JMOL at 22-23.) That precedent pre-dates *WesternGeco* and applies an extraterritoriality analysis that the Supreme Court rejected. As Judge Stark—who now sits on the Federal Circuit—found on remand in *Power Integrations*, “the Supreme Court’s *WesternGeco* [] decision implicitly overruled the Federal Circuit’s *Power Integrations* opinion,” and “ha[d] equal applicability to [] direct infringement allegations . . . governed by §271(a).” *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 2018 WL 4804685, at *1 (D. Del. Oct. 4, 2018); *see also Plastronics Socket Partners, Ltd. v. Hwang*, 2019 WL 4392525, at *5 (E.D. Tex. June 11, 2019) (similar); Cole/Sullivan Op. at 23-24, 24 n.16, 26.

Norton also repeatedly relies on *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007), but the similarities between that case and this case are entirely superficial. Justice Ginsburg’s opinion

in *Microsoft* started with an important fact: “[i]t bears emphasis . . . that uninstalled Windows software **does not** infringe AT&T’s patent[.]” 550 U.S. at 442 (emphasis added). In other words, the software—as it sat in the United States and as distributed from the United States—did **not** infringe the asserted patent. Because the software did **not** infringe, the issue was infringement under § 271(f), which Congress passed to create new liability when certain **non-infringing** components are exported from the United States. *Id.* at 451-52. As a matter of statutory interpretation, the Supreme Court held that non-infringing software—to be copied and installed on machines abroad—was not a “component” within the scope of § 271(f).

Microsoft is irrelevant because Norton’s software directly infringes Columbia’s Asserted Patents—under § 271(a)—as it sits on servers in the United States and as distributed from the United States to customers in foreign countries. Under § 284, Columbia is entitled to “damages adequate to compensate **for the infringement** . . . in no event less than a reasonable royalty **for the use made of the invention by the infringer**” (emphasis added). Columbia adduced substantial evidence that Norton’s OUS Sales are rooted in domestic acts of infringement, and by statute, Columbia is entitled to a reasonable royalty for those acts of infringement taking into account the full benefit that Norton obtained from them (including profits from sales to OUS Customers).

2. Columbia Adduced Overwhelming Evidence of Domestic Acts of Infringement Directly Connected to Sales to OUS Customers.

Columbia adduced overwhelming evidence that Norton’s sales to OUS Customers are rooted in and directly connected to domestic acts of infringement. (Ex. F (JX-9 (Brennan)) 106:4-7 (“Q. Would you agree with me that Symantec sells globally software products that are substantively designed, developed, and mastered in the United States? A. Yes.”); *id.* 42:5-7 (“Q. . . . [T]he only single point of truth for all customers globally is Culver City? A. Yes.”).) After hearing the evidence, the jury decided that Norton sells globally software made in and distributed

from the United States. (Dkt. 1206 at 4-5.)

First, the damages award can be fully sustained with reference to claim 11 of the '322 Patent (CRM). Uncontroverted evidence showed that Norton creates infringing master versions ("masters") of its software in the United States, and it stores infringing CRM copies on servers in the United States. (Ex. G (JX-10 (Reyes)) 17:19-18:3, 30:21-23, 34:10-13, 35:5-21, 36:15-25, 46:12-15, 49:13-16; JX-9 (Brennan) 37:12-38:12, 39:8-39:10, 89:15-24, 90:4-16.) Norton globally distributes its software—copies of infringing CRMs—from U.S. servers using an "electronic FedEx" known as a content delivery network ("CDN"). (JX-9 (Brennan) 42:13-17, 50:7-19, 57:21-58:22; Trial Tr. 1727:11-1728:1; JX-10 (Reyes) 47:22-48:7, 50:7-21, 51:10-16.) To do that, Norton copies an infringing CRM in the United States and sends it to a CDN server in the United States, where another infringing CRM is created on another U.S. server. (JX-10 (Reyes) 50:7-15; Trial Tr. 1728:23-1729:13.) The CDN then acts as an electronic delivery service globally. (JX-9 (Brennan) 54:11-55:8, 57:1-58:22; JX-10 (Reyes) 48:3-7; Trial Tr. 1728:12-22.)

Critically, as the jury heard from Norton's Linda Brennan, Norton has several "localized" masters that, although substantively the same, have customer-facing text translated into a foreign language specifically for distribution in a foreign country. (JX-9 (Brennan) 42:22-44:1.) For example, French and Japanese language versions are "localized" for sale in France and Japan, and those "localized" masters are stored in and distributed from the United States. (*Id.*) The importance to the *WesternGeco* analysis cannot be overstated: Norton creates and stores in the United States infringing "localized" masters that have no other purpose than distribution to and sale in a foreign country. The jury was well within the law in concluding that sales to OUS customers should be taken into account when assessing a reasonable royalty due to these and other acts of domestic infringement. And as a legal matter, there would be no way to compensate

Columbia for infringing “localized” master versions—as mandated by § 284—if the revenue that Norton earned from them (due to sales in the intended foreign country) could not be considered.

Moreover, although claim 11 (CRM) alone is sufficient to sustain the verdict, there are other significant connections between domestic acts of infringement and OUS sales. Norton develops, tests, and runs infringing software—for the benefit of customers globally—within the United States. (JX-9 (Brennan) 106:4-7; JX-10 (Reyes) 15:9-20, 30:21-23, 55:18-25.) In performing those tasks, Norton directly infringes claim 2 (method), claim 11 (CRM), and claim 27 (system) of the ’322 Patent, and those actions strengthen the connection between domestic infringement and sales to OUS customers.²⁹

In its JMOL Motion, Norton argues for the first time that it “created the original golden disks before the patents issued” and therefore “they are non-infringing.” (JMOL at 21.)³⁰ As an initial matter, the record citation Norton provides is Dr. Sullivan’s testimony, which actually contradicts Norton’s contention. (JMOL at 21; *see* Trial Tr. 1837:24-1839:25.) Contrived lawyer-argument in a JMOL brief is not evidence, and Norton simply has no evidence to support its new non-infringement contention.³¹ That is especially true because the new contention conflicts with record evidence showing that Norton continuously created and distributed master versions of its software for “major” and “minor” releases. (Trial Tr. 1495:5-12; JX-9 (Brennan) 9:14-20, 45:6-

²⁹ Dr. Sullivan explained, from an economics perspective, why the hypothetical negotiators would have agreed that the royalty should take into account sales to OUS. (Trial Tr. 1725:11-23, 1729:17-24, 1735:13-1736:3.)

³⁰ Norton also argues that it “does not sell hard drives or computers” (JMOL at 21), but that is irrelevant. Norton “made” an infringing CRM within the meaning of § 271(a) each time Norton created, stored, or distributed the Accused Products.

³¹ Additionally, the Court should disregard this new contention as waived. Norton did not ever disclose it in response to Columbia’s Interrogatory No. 8, which required that Norton identify each basis upon which Norton maintained the accused products did not infringe Columbia’s patents. (Ex. H at 4-10); *see* Federal Rule of Civil Procedure 37(c)(1).

9, 45:23-46:5, 50:7-19; JX-10 (Reyes) 18:15-20, 46:21-47:3, 47:22-48:7.)³² Indeed, witness testimony supports that the SONAR/BASH component specifically was continuously incorporated into new masters over time—as Norton’s products were updated—and that this work happened in the United States. (JX-10 (Reyes) 8:4-9, 12:25-13:10, 13:19-22, 16:1-7, 18:15-20, 46:12-15.)

Second, the damages award also can be sustained with reference to claim 2 (method) of the ’115 Patent, which the jury found Norton directly infringed through joint infringement. The infringement necessarily is joint because Norton’s customers performed the first three steps of claim 2 and Norton performed the remaining two critical steps—creating the combined model of function calls and notifying the community of anomalous function calls. (Trial Tr. 1026:9-1027:11, 1254:17-1256:25, 1186:22-1187:3.) The jury was instructed regarding joint infringement without objection (*id.* 2833:16-2834:10), and as noted above, Norton has not contested the sufficiency of the evidence for the jury’s joint infringement finding under the Federal Circuit’s *Akamai* precedent. The jury’s finding of joint infringement is legally equivalent to a finding that Norton itself directly infringed claim 2 under § 271(a). *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) (en banc) (“Direct infringement under § 271(a) occurs where all steps of a claimed method are . . . attributable to a single entity.”).

Norton’s joint infringement—regardless of whether a customer is located within or outside of the United States—is domestic. The United States is where Norton is headquartered (Trial Tr. 2818:20-23); where Norton designed, developed, mastered, and tested the accused products (JX-9 (Brennan) 106:4-7, 106:15-19; JX-10 (Reyes) 15:9-20, 30:21-23, 55:18-25)); and where

³² Norton’s new contention is contrived and should be viewed with skepticism because Norton (i) did not cross-examine Dr. Sullivan on this issue, (ii) did not argue this issue in its *Daubert* motion regarding “foreign sales,” (iii) did not mention this in any of its expert reports, (iv) did not make this argument to the jury, and (v) Norton’s own damages expert, Mr. Hosfield, calculated a royalty base that is inconsistent with the new contention. (Hosfield R. at 20-21.)

Norton licensed and activated the accused products, collected BASH submissions from customers, and created new decision trees and disseminated updates (JX-9 (Brennan) 45:6-9, 45:23-46:5; Ex. I (JX-8 (Wall)) 14:7-20, 15:22-16:5; JX-4 (Pereira) 225:7-226:4; 229:25-230:5). Thus, Norton performed its method steps—creating the combined model and notifying the community—in the United States. With regard to the steps performed by customers, in *Akamai* the Federal Circuit applied principles of vicarious liability and held that in certain circumstances—that Norton does not dispute are present here—a “third party’s actions are attributed to the alleged infringer such that the alleged infringer becomes the single actor chargeable with direct infringement.” 797 F.3d at 1022-23.³³ As a matter of law, the method steps performed by Norton’s customers—U.S. and OUS—are attributed to Norton, which operates out of the United States.³⁴ Thus, all joint infringement with customers—U.S. and OUS—is fundamentally domestic.

Moreover, even setting aside joint infringement, the jury’s verdict is supported by Norton’s acts of infringement that are indisputably domestic. First, Norton alone directly infringed claim 2 of the ’115 Patent when designing, developing, and testing the infringing software in the United States, which served as critical prerequisites to worldwide sales. That included versions of the infringing products localized for international markets. (*See supra* at 26-27.) In addition, the

³³ Norton cites *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005) and *Meyer Intellectual Properties Ltd. v. Bodum, Inc.*, 690 F.3d 1354 (Fed. Cir. 2012) to argue that it cannot be liable for infringement because certain method steps were performed outside the United States. (JMOL at 20.) Those cases substantially pre-date *Akamai* and *WesternGeco*, and neither addressed or concerned joint infringement liability.

³⁴ This is an issue of first impression. Columbia’s position is consistent with *WesternGeco* and the vicarious liability principles underpinning *Akamai*, under which, *e.g.*, applicable law is determined by assessing the location with “the most significant relationship to the occurrence and the parties.” Restatement (Second) of Conflict of Laws §§ 145, 174 (1971). That relationship test looks to “place of business of the parties,” “the place where the conduct causing injury occurred,” and “the place where the relationship, if any, between the parties is centered,” *id.*; *see Yost v. Travelers Ins. Co.*, 181 F.3d 95 (4th Cir. 1999). Here, that test strongly points to the United States.

model building process that Norton used—as described in claim 2 of the ’115 Patent—benefited all of Norton’s customers globally. Nearly half of Norton’s global customer base was located in the United States (1720:6-11) and there can be no dispute that Norton’s joint infringement with U.S. customers is entirely domestic. All customers globally benefitted from that model building process that required significant and repeated acts of domestic infringement. Under *WesternGeco*, the nexus to domestic infringement is sufficient to include sales to OUS Customers in the royalty.

Finally, Norton’s arguments regarding sales to OUS Customers, as well as its arguments regarding the ’115 Patent specifically (with respect to both infringement and damages), concern only a portion of the jury’s award—in some cases a small portion—and cannot justify vacating the full award or retrial of all liability and damages issues. For example, if the Court hypothetically found that sales to OUS Customers should not have been considered in calculating the royalty for the ’115 Patent, that would impact only \$21.9 million of the \$185.1 million awarded by the jury. In that hypothetical case, an offer of remittitur would be appropriate. *See Eshelman v. Puma Biotechnology, Inc.*, 2 F.4th 276, 285 (4th Cir. 2021); *see also Shockley v. Arcan, Inc.*, 248 F.3d 1349, 1364 (Fed. Cir. 2001). Columbia will promptly make any additional submissions the Court might find useful—from its economics expert or otherwise—should the Court decide it is necessary to offer remittitur (although we believe the jury award should be sustained in full).

CONCLUSION

As the parties regularly observed during trial, the jury was remarkably attentive and it is an understatement to say its deliberations showed a careful weighing of the evidence and full understanding of the Court’s legal instructions. Nothing Norton said in its JMOL Motion supports taking issues away from an extremely smart and deliberate jury. For the foregoing reasons, Norton’s Renewed Motion for Judgment as a Matter of Law should be denied in full.

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Respectfully submitted,

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